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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,647	01/18/2001	Galina Dorozhkina	109289.00173	6089

28765 7590 11/01/2005

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WASHINGTON, DC 20006

EXAMINER
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MARKHAM, WESLEY D

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/761,647	Applicant(s) DOROZHKINA ET AL.	
	Examiner Wesley D. Markham	Art Unit 1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2,17-19,21,22,25,27-29,31-34 and 38-50 is/are pending in the application.
- 4a) Of the above claim(s) 18,19,21,22,25,31 and 38-50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,17,27-29 and 32-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. Acknowledgement is made of the amendments filed by the applicant on 4/18/2005, 5/10/2005, and 8/19/2005, in which (1) the specification of the instant application was amended (4/18/05), (2) three replacement sheets of drawings were submitted (5/10/05), and (3) Claims 1, 2, 17 – 19, 21, 22, 25, 27, and 31 – 34 were amended, Claims 3 – 16, 20, 23, 24, 26, 30, and 35 – 37 were canceled, and Claims 38 – 50 were added (8/19/05). **Claims 1, 2, 17 – 19, 21, 22, 25, 27 – 29, 31 – 34, and 38 – 50** are pending in U.S. Application Serial No. 09/761,647, and an Office action on the merits follows.

### *Election/Restrictions*

2. Newly submitted Claims 38 – 50 are directed to inventions that are independent or distinct from the invention / species originally elected for the following reasons:
3. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1, 2, 17 – 19, 21, 22, 25, 27 – 29, and 31 – 34, drawn to a method of making an optical information storage medium using a specific fluorescent dye-containing filling composition comprising a glycidyl ether, an epoxide, and one or more alcohols, classified in class 427, subclass 157.
  - II. Claims 38 – 46, drawn to a method of making an optical information storage medium using a specific patterned polymerized layer obtained by

polymerizing a composition comprising alkylacrylate and triacrylate, classified in class 427, subclass 258.

III. Claims 47 – 50, drawn to a method of making an optical information storage medium using a specific filling composition comprising sufficient polyacrylic acid in an alcohol solution to form a photosolidified layer, classified in class 427, subclass 487.

4. The inventions are distinct, each from the other, because of the following reasons:
5. Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility, such as in making an optical information storage medium having a patterned polycarbonate (PC) or PMMA base (i.e., a storage medium wherein the polymerized layer / base is not formed by polymerizing a mixture of an alkylacrylate and a triacrylate in specific proportions). Additionally, invention II has separate utility, such as in making an optical information storage medium using a different fluorescent dye-containing filling composition (e.g., a filling composition that does not include a glycidyl ether, an epoxide, and/or an alcohol). See MPEP § 806.05(d).
6. Inventions I and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility, such as in making an optical information storage medium using a different filling composition than that of invention III (e.g., a filling composition that does not include

polyacrylic acid). Additionally, invention III has separate utility, such as in making an optical information storage medium using a different fluorescent dye-containing filling composition than that of invention I (e.g., a filling composition that does not include a glycidyl ether, an epoxide, and/or an alcohol). See MPEP § 806.05(d).

7. Inventions II and III are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention III has separate utility, such as in making an optical information storage medium having a patterned polycarbonate (PC) or PMMA base (i.e., a storage medium wherein the polymerized layer / base is not formed by polymerizing a mixture of an alkylacrylate and a triacrylate in specific proportions). Additionally, invention II has separate utility, such as in making an optical information storage medium from a different fluorescent dye-containing filling composition (e.g., a filling composition that does not include a polyacrylic acid / alcohol solution). See MPEP § 806.05(d).
8. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification and search requirements, restriction for examination purposes as indicated is proper.
9. Since applicant has received an action on the merits for the originally presented invention (i.e., the invention recited in presently pending Claims 1, 2, 17, 27 – 29, and 32 – 34), this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, newly added Claims 38 – 50 are withdrawn from consideration as being directed to a non-elected invention. See 37

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CFR 1.142(b) and MPEP § 821.03. Additionally, non-elected species Claims 18, 19, 21, 22, 25, and 31 remain withdrawn from further consideration, there being no allowable generic claim.

### ***Drawings***

10. The objections to the drawings set forth in paragraph 3 of the previous Office action (i.e., the non-final Office action mailed on 12/16/2004) are withdrawn in light of the applicant's submission on 5/10/2005 of three (3) sheets of acceptable drawings depicting Figures 1 – 7.

### ***Specification***

11. The applicant is thanked for reviewing the specification and correcting a number of minor errors throughout.

### ***Claim Rejections - 35 USC § 112***

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. The rejection of Claims 6, 7, 30, 33, and 34 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, set forth in paragraphs 7 – 12 of the previous Office action, is withdrawn in light of the applicant's amendment to (1)

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cancel Claims 6, 7, and 30, (2) amend Claim 33 to include the generic formula of IRGACURE 1700, and (3) amend Claim 34 to clarify the amount of benzoyl peroxide and dibutylaniline in the polymerizable composition.

14. Claims 1, 2, 17, 27 – 29, and 32 – 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

15. Amended independent **Claim 1**, from which **Claims 2, 17, 27 – 29, and 32 – 34** depend, requires, in part, that the polymerizable substance in the fluorescent dye-containing filling composition comprise “glycidyl ether” in an amount of 0.1 – 85 wt% and “epoxide” in an amount of 5 – 90 wt%. This limitation renders the scope of the claims vague and indefinite because it is unclear what compounds “glycidyl ether” and “epoxide” encompass in the context of the claimed invention. The examiner notes that the specification does not provide a definition of what compounds are encompassed by the terms “glycidyl ether” and “epoxide”. It is unclear what chemical composition a compound must have to be encompassed by the terms “glycidyl ether” and “epoxide”. For example, is every compound having an epoxy group considered to be an “epoxide”? Is every compound having a glycidyl ether functionality considered to be a “glycidyl ether”? The scope of the claims is further confused by the fact that glycidyl ether compounds contain epoxy groups. Are “glycidyl ether” compounds “epoxides” in the context of the claims? If not, what is the distinction? If so, do the claims require separate “glycidyl ether” and “epoxide”

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compounds, or would a single glycidyl ether compound also qualify as the "epoxide" of the claimed invention? For the above reasons, the scope of the claims is vague, and the claims are indefinite under 35 U.S.C. 112, second paragraph.

16. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

17. Claims 1, 2, 27 – 29, and 32 – 34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

18. Amended independent **Claim 1**, from which **Claims 2, 27 – 29, and 32 – 34** depend, requires, in part, that the fluorescent dye-containing filling composition comprise a polymerizable substance and a solvent, wherein the polymerizable substance comprises glycidyl ether (0.1 – 85 wt%), epoxide (5 – 90 wt%), and a first alcohol (0 – 10 wt%), and wherein the solvent comprises a second alcohol that is different from the first alcohol. The specification as originally filed does not have support, either explicit, implicit, or inherent, for the genus of filling compositions now claimed by the applicant. Specifically, the examiner has reviewed the specification of the instant application as originally filed and notes that there is no explicit description,



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disclosure, or discussion of the aforementioned genus of filling compositions.

Likewise, the specification as originally filed does not provide any basis to conclude that the aforementioned genus of filling compositions was inherently present in the application at the time of filing. According to MPEP 2163, the written description for a claimed genus may be satisfied through sufficient description of a representative number of species sufficient to show that the applicant was in possession of the claimed genus (*Eli Lilly*, 119 F.3d at 1568, 43 USPQ2d 1406). A "representative number of species" means that the species which are adequately described are representative of the entire genus. In the response filed on 4/18/2005 (page 24, paragraph 1), the applicant refers to several specific filling compositions in the originally disclosed examples (e.g., Examples 1 – 12) as support for the genus of filling compositions required by amended Claim 1. However, the originally disclosed filling compositions each contain very specific components in a very specific ratio and are not correlated at all by the originally filed specification. As such, the filling compositions originally described by the applicant only "map out" a minute portion of the presently claimed genus (i.e., they are not representative of the entire genus now claimed by the applicant). Therefore, the claims fail to comply with the written description requirement of 35 U.S.C. 112, first paragraph. Please note that Claim 17 has not been rejected on this basis because the specific filling composition required by Claim 17 was adequately described in the originally filed specification (e.g., in originally filed Claim 17).

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19. Claims 27 – 29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
20. Specifically, **Claim 27**, from which **Claims 28 and 29** depend, requires (1) filling the second relief pattern with a filling composition comprising a fluorescent dye (due to the amendment of independent Claim 1, from which Claim 27 depends) and (2) covering the filling composition with a covering composition comprising a fluorescent dye and causing the dye to diffuse from the covering composition into the filling composition. This combination of limitations does not have support, either explicit, implicit, or inherent, in the application as originally filed. Specifically, the originally filed application has support for (1) filling the relief pattern with a fluorescent dye-containing filling composition (pages 4 and 5 of the specification) or (2) filling the relief pattern with a filling composition that contains no dye, and then causing a dye to diffuse from a covering composition into the filling composition (page 6 of the specification), but not a combination of (1) and (2) as required by Claims 27 – 29.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wesley D. Markham whose telephone number is (571) 272-1422. The examiner can normally be reached on Monday - Friday, 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

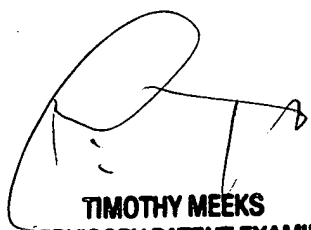
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



WDM

Wesley D Markham  
Examiner  
Art Unit 1762



**TIMOTHY MEEKS**  
**SUPERVISORY PATENT EXAMINER**